We Claim:

1. A method for doping electrically conductive organic compounds, which comprises:

introducing a doping substance activated by exposure with an activation radiation into an electrically conductive organic compound;

irreversibly fixing the activatable doping substance in the organic compound as a result of exposing the organic compound with the activation radiation; and

removing unbounded doping substance from the organic compound after the exposure.

2. The method according to claim 1, which further comprises carrying out the irreversible fixing of the doping substance by at least one of forming a covalent bond and forming a coordinate bond to the organic compound.

3. The method according to claim 1, which further comprises providing the organic compound as an organic semiconductor.

4. The method according to claim 1, which further comprises carrying out the exposure of the organic compound section by section.

5. The method according to claim 4, which further comprises carrying out the section by section exposure utilizing a photomask.

6. The method according to claim 1, which further comprises:

providing light-opaque regions opaque to the activation radiation used for the exposure in the organic compound; and

during the exposure, obtaining unexposed sections in the organic compound, the unexposed sections being disposed behind the light-opaque regions as seen in a direction of a radiation source used for the exposure to the organic compound.

7. The method according to claim 6, which further comprises forming the light-opaque regions by a gate electrode.

8. The method according to claim 6, which further comprises forming the light-opaque regions utilizing a gate electrode.

9. A method for fabricating an organic field-effect transistor, which comprises:

depositing a gate electrode, a source contact, a drain contact, a gate dielectric, and an electrically conductive organic semiconductor on a substrate;

introducing a doping substance activated by exposure with an activation radiation into the organic semiconductor;

carrying out section-by-section exposure with the activation radiation; and

after the exposure, removing unbounded doping substance from the organic semiconductor to irreversibly fix, in regions of the organic semiconductor adjoining the source contact and the drain contact, the doping substance in the organic semiconductor and to obtain contact regions adjoining the source contact and the drain contact, the contact regions having increased electrical conductivity.

10. The method according to claim 9, which further comprises applying a photomask for the section-by-section exposure.

11. The method according to claim 9, which further comprises carrying out the section-by-section exposure by applying a photomask.

12. The method according to claim 9, which further comprises:

providing the substrate as a substrate transparent to the activation radiation;

carrying out the depositing step by depositing, on the substrate, the source and drain contacts spaced apart from the gate electrode;

depositing a gate dielectric on the gate electrode to obtain a spacing in which the substrate is uncovered between the gate dielectric and the source contact and also between the gate dielectric and the drain contact;

depositing the organic semiconductor on the substrate, the source contact, the drain contact, and the gate dielectric to fill, with the organic semiconductor, at least one of the spacing between the gate dielectric and the source contact and the spacing between the gate dielectric and the drain contact;

carrying out the exposure step with the activation radiation from a side of the substrate to obtain, adjoining the source contact and the drain contact, contact regions having increased conductivity in the organic semiconductor; and

subsequently removing excess doping substance from the organic semiconductor.

13. The method according to claim 9, which further comprises simultaneously depositing the gate electrode, the source contact, and the drain contact on the substrate.

14. The method according to claim 9, which further comprises constructing the gate dielectric from a material transparent to the activation radiation.

15. The method according to claim 9, which further comprises providing the gate dielectric with a material transparent to the activation radiation.

16. An organic field-effect transistor, comprising:

a gate electrode;

a gate dielectric insulating said gate electrode;

a source contact;

a drain contact; and

an organic semiconductor:

being disposed between said source contact and said drain contact;

adjoining at least one of said source contact and said drain contact;

having a contact region with increased electrical conductivity; and

being doped with a doping substance irreversibly fixed in said organic semiconductor.

17. The organic field-effect transistor according to claim 16, further comprising:

a front side; and

a rear side having at least one section formed by said organic semiconductor.

18. The organic field-effect transistor according to claim 16, further comprising:

a front side; and

a rear side having said contact region formed by said organic semiconductor.

19. The organic field-effect transistor according to claim 17, wherein said rear side includes at least one section formed by one of said source contact and said drain contact, said at least one section adjoining said at least one section formed by said organic semiconductor.

20. The organic field-effect transistor according to claim 17, wherein said at least one section formed by said organic semiconductor is doped with said irreversibly fixed doping substance.

21. The organic field-effect transistor according to claim 16, wherein said doping substance is irreversibly fixed in said organic semiconductor by a covalent or a coordinate bond.

22. The organic field-effect transistor according to claim 16, wherein said doping substance has a covalent or a coordinate bond irreversibly fixing said doping substance in said organic semiconductor.

23. The organic field-effect transistor according to claim 16, wherein, in a plan view of the organic field-effect transistor, said gate electrode, said source contact, and said

drain contact have no overlap and sections of said organic semiconductor doped with said irreversibly fixed doping substance and having an increased electrical conductivity are disposed at least one of between said gate electrode and said source contact and between said gate electrode and said drain contact.

24. The organic field-effect transistor according to claim 16, wherein:

in a plan view of the organic field-effect transistor, said gate electrode, said source contact, and said drain contact have no overlap; and

sections of said organic semiconductor doped with said irreversibly fixed doping substance and having an increased electrical conductivity are disposed at least one of between said gate electrode and said source contact and between said gate electrode and said drain contact.